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April 15, 2003

Ms. Paula Stine  
Permit Section, Bureau of Land  
Illinois Environmental Protection Agency  
1021 N. Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794

Re: CCL Customer Manufacturing, Inc. Quarterly Report

Dear Ms. Stine:

Enclosed please find the above-referenced Quarterly Ground Water Monitoring Report. If you have any questions with respect to this report, please feel free to contact us.

Very truly,

  
Barbara Magel

BAM/klw

Enclosure

bcc: ✓ Juan Thomas  
Rich Ferreira  
Jim Tracy

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**GROUND-WATER QUALITY ASSESSMENT PLAN**  
**March 2003**  
**QUARTERLY REPORT**

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## Section 1

### GENERAL

A Ground-Water Quality Assessment Plan was submitted to the Illinois Environmental Protection Agency (IEPA) on August 10, 1984, in response to significant differences from background for some ground-water contamination indicator parameters. After their review, a revised plan was submitted on September 20, 1984. Ground-water Assessment reports have been submitted to IEPA.

Presently, ground-water monitoring is conducted as a component of the CCL Custom Manufacturing, Inc. RCRA Surface Impoundment Closure Plan (ILD 005141726) dated March 30, 1988, and IEPA approval letter dated June 28, 1988. In addition, in a letter from IEPA dated November 10, 1988, further modifications of the closure/post-closure monitoring well locations and parameters were recommended (see Table 1).

These IEPA recommended sampling and analysis activities are incorporated into this Quarterly Report.



TABLE 1  
March 2003 GROUND-WATER PARAMETERS  
(QUARTER 1 ON CLOSURE/POST-CLOSURE SCHEDULE)

Monitor Well No.	VOC <sup>a</sup>	In-Situ <sup>b</sup>	Level Measurement
1			X
1A			X
1B			X
R2			X
3			X
3A			X
3B	X	X	X
3C			X
3D*			X
3E	X	X	X
3F	X	X	X
3G			X
3H			X
3I			X
3J			X
3K	X	X	X
3L	X	X	X
4	X	X	X
4A	X	X	X
4B	X	X	X
4C			X
4D*			X
4E*			X
4F*			X
4G*			X
4H*			X
5			X
5A			X
5B			X
5C			X

TABLE 1 (Continued)

March 2003 GROUND-WATER PARAMETERS  
(QUARTER 1 ON CLOSURE/POST-CLOSURE SCHEDULE)

Monitor Well No.	VOC <sup>a</sup>	In-Situ	Level Measurement
5D	X	X	X
5E			X
5F			X
5G			X
6	X	X	X
7	X	X	X
7A	X	X	X
8	X	X	X
9			X
9A	X	X	X
9B	X	X	X
9C	X	X	X
20			X
Field Blanks <sup>c</sup>	X		
Trip Blanks <sup>c</sup>	X		
Matrix Spike/Duplicate	X		

<sup>a</sup> Analysis by EPA Method 8240, Test Methods for Evaluating Solid Waste, SW-846 (EPA, 1986)

<sup>b</sup> Field measurements include depth to water, depth to well bottom, temperature, specific Conductance, and pH.

<sup>c</sup> Required as part of RFI Activities.

\* Indicates that the well is a piezometer.

## Section 2

## SAMPLING ACTIVITIES

Ground-water sampling activities were conducted by GEOTECHNOLOGY, Inc., Collinsville, Illinois, at the CCL Custom Manufacturing, Inc. (formerly Peterson/Puritan, Inc.), Danville, Illinois facility on March 6 - 7, 2003.

Monitoring well locations are shown on Attachment I. Ground-water samples and in-situ data were collected at the monitoring wells in accordance with IEPA recommendations. Depths to water were measured for the 36 shallow monitoring wells, one deep well, and six piezometers on the CCL property. Depths to well bottom were also measured for all wells. The top of the inner well casing was used as a reference point for each measurement. The depths were measured with an electronic water level indicator, to the nearest hundredth of a foot. These measurements were subsequently used to calculate the volume of water to be purged from the well prior to collection of ground water quality samples. All depth measurements were adjusted for casing stick-up and ground surface elevation. These measurements are reported in this report as well as the depths below land surface, and ground-water surface elevations (see Attachment IIa).

Prior to the collection of samples from each monitoring well, ground water was purged a minimum of three well volumes except in cases where the wells were purged dry prior to removal of three well volumes. All purge water was properly disposed of on site into the wastewater equalization tank. Generally, the water levels in the wells recovered quickly. The ground-water sample and the in-situ chemical measurements were collected the purged well. The volatile organic compound samples were collected and transported following applicable protocols to Suburban's analytical laboratory in Hillside, Illinois. During the sampling activities two field duplicate samples were collected for VOCs at MW-3F and MW-4A. Two field blanks (equipment blank) and two trip blanks (background) were also collected during the sampling activities.

Attachment IIa includes the results of field in-situ measurements (i.e., Ph, water temperature, and specific conductance), depth to water, and depth to bottom. Attachment Iia supplemental presents the depth measures and changes in depth to water and bottom for each well sampled. In addition, Attachment IIb presents the results of laboratory analysis of the samples for volatile organic constituents. Attachment IIIa and IIIb present Potentiometric surface contour plots of the water table aquifer.

## Section 3 HYDROLOGY AND STATISTICAL ANALYSIS OF DATA

### 3.1 HYDROLOGY

During the ground-water sampling activities, the ground-water levels were measured in the 36 shallow wells, 1 deep well (PZ-20), and 6 piezometers (PZ-3D, PZ-4D, PZ-4E, PZ-4F, PZ-

4G, and PZ-4H). The water-level measurements were made more than sixteen years after completion of the perimeter ground-water interceptor system, more than ten and one half years after the completion of the tanker truck unloading area ground-water interceptor, and about nine years after the completion of the northeast and southwest extensions to the main interceptor. The ground-water levels are typically 1.8 feet higher than the October, 2002 quarterly levels.

Ground-water levels near the interceptor have not changed as the interceptor discharge level is controlling the response of these wells. Thirteen monitoring wells (MW-1A, MW-R2, MW-3F, MW-3H, MW-3J, MW-3K, MW-3L, MW-4B, MW-7A, MW-8, MW-9, MW-9A, and MW-9B) have responded to the operation of the ground-water interceptor. Six other monitoring wells (MW-1, MW-1B, MW-3B, MW-3E, MW-5F, and MW-7) may have responded. Monitoring wells MW-3B, MW-3E, MW-3K, MW-7, MW-7A, MW-8, and MW-9A are down-gradient of the ground-water interceptor; the remaining monitoring wells that have responded are up-gradient of the interceptor.

The ground-water levels were analyzed using multi-variate regression methods to determine the general magnitude and direction of the ground-water gradient and ground-water flow across the site. This method of analysis has been used in previous quarterly reports. A simple linear model fit the water level data best and produced statistics that were more significant than more complex models. The correlation coefficient of the linear model is about 0.8, showing moderate correlation. The estimated ground-water gradient is 33.4 feet per mile in a direction 20.43 degrees north of west, reflecting the continued response to the operation of the ground-water interceptor.

The map of the estimated ground-water contours is shown in Attachment III. The linear contours are two-foot increments. Inferred contours pass under and through the former impoundment area and the fire pond. No significant influences of these areas are observed in the ground-water levels. Attachment III also depicts ground-water (2-foot interval) contours that were estimated from the observed ground-water levels using a Kriging estimator. This method interpolates and extrapolates levels based on the structure of the basic data. The method fits or "honors" measuring points. The operations of the new extensions to the main interceptor are quite noticeable in the water levels and contours in both the northeast and southwest areas of the facility.

### 3.2 RATE AND EXTENT

The quarterly ground-water sampling wells have been previously modified to incorporate wells that are further down-gradient. The facility also operates a down-gradient, perimeter ground-water interceptor that collects the ground-water that flows across the site and discharges to a local POTW. The ground-water interceptor has been documented in a

previously submitted design and as-built documents. The operational levels of the interceptor (636.8 to 641.8 feet, MSL) are significantly lower than the observed ground-water levels on both sides (639.0 to 646.2 feet MSL). The interceptor, therefore, receives ground water from both its normally "up-gradient" and "down-gradient" sides.

#### Section 4

#### SUMMARY AND CONCLUSIONS

During the sampling activities, ground water from monitoring wells was sampled and analyzed for volatile organic substances. The results of these sampling activities are presented in this report. All laboratory results for analyses are presented in Attachment IIb.

Ground water surface elevation data continues to be obtained quarterly from all shallow wells and piezometers at the CCL site. The ground-water surface elevation measurements calculated from the data collected at CCL (Attachment IIa). The most recent ground-water surface elevation measurements reflect seasonal recharge of the shallow aquifer and the continued operation of the ground-water interceptor system. The revised ground-water level contours, using static water level measurements obtained, are presented in Attachment III. Attachment IIIa presents the ground-water level contours derived from statistical regression analysis. Attachment IIIb presents the interpolated ground-water contours. A fairly uniform hydraulic gradient exists at the site, although the ground-water interceptor system has had a greater influence on water levels of monitor wells in proximity to the interceptor system.

Quarterly ground-water monitoring at the CCL Custom Manufacturing, Inc. facility will continue as directed by the Illinois Environmental Protection Agency.



March 03

ATTACHMENT II (a) Supplement I

DTW/DTB Changes

Monitoring Well Number	Oct 02 DTW (ft) [Measurements are from top the of inner casing]	Mar 03 DTW (ft)	Oct 02 DTB (ft)	Mar 03 DTB (ft)	Del DTW (ft)	Del DTB (ft)	WELL M.P. (ft.MSL)	Oct 02 W.L (ft)	Mar 03 W.L. (ft)
1	7.88	6.65	19.00	15.00	1.23	4.00 *	653.90	646.02	647.25
1A	13.59	13.95	22.43	22.43	-0.36	0.00	653.91	640.32	639.96
1B	8.78	7.55	17.14	17.14	1.23	0.00	654.25	645.47	646.70
2R	11.78	10.50	20.75	20.75	1.28	0.00	654.37	642.59	643.87
3	9.85	8.65	21.56	21.56	1.20	0.00	653.40	643.55	644.75
3A	8.24	5.26	18.28	18.28	2.98	0.00	653.50	645.26	648.24
3B	9.54	3.82	19.85	19.85	5.72	0.00	651.62	642.08	647.80
3C	13.85	8.75	18.05	18.05	5.10	0.00	653.33	639.48	644.58
3D	9.51	9.05	17.55	17.55	0.46	0.00	655.57	646.06	646.52
3E	12.00	8.70	20.81	20.80	3.30	0.01	653.57	641.57	644.87
3F	10.49	9.00	19.90	19.90	1.49	0.00	652.35	641.86	643.35
3G	11.10	6.90	19.62	19.60	4.20	0.02	651.63	640.53	644.73
3H	10.69	8.25	20.53	20.53	2.44	0.00	653.57	642.88	645.32
3I	8.58	7.51	21.80	21.80	1.07	0.00	656.50	647.92	648.99
3J	11.77	10.35	19.95	19.95	1.42	0.00	653.01	641.24	642.66
3K	7.51	5.55	19.15	19.15	1.96	0.00	652.31	644.80	646.76
3L	9.52	5.02	22.00	22.00	4.50	0.00	651.49	641.97	646.47
4	7.87	6.32	19.57	19.55	1.55	0.02	663.20	655.33	656.88
4A	10.45	7.20	22.00	22.00	3.25	0.00	662.03	651.58	654.83
4B	11.88	9.34	22.43	22.43	2.54	0.00	658.59	646.71	649.25
4C	8.74	8.15	18.78	18.78	0.59	0.00	662.54	653.80	654.39
4D	8.29	7.00	24.27	24.27	1.29	0.00	660.51	652.22	653.51
4E	9.28	9.05	24.62	24.62	0.23	0.00	661.31	652.03	652.26

4F	6.38	5.72	20.11	20.11	0.66	0.00	656.21	649.83	650.49
4G	10.90	9.55	20.14	20.14	1.35	0.00	655.48	644.58	645.93
4H	14.33	13.22	21.52	21.52	1.11	0.00	657.23	642.90	644.01
5	13.15	10.95	18.47	18.47	2.20	0.00	662.50	649.35	651.55
5A	14.09	11.88	18.36	18.36	2.21	0.00	661.63	647.54	649.75
5B	10.44	9.50	20.11	20.11	0.94	0.00	659.59	649.15	650.09
5C	10.55	8.35	18.96	18.96	2.20	0.00	659.77	649.22	651.42
5D	9.32	7.75	16.99	16.99	1.57	0.00	656.97	647.65	649.22
5E	12.66	9.98	27.23	27.23	2.68	0.00	661.25	648.59	651.27
5F	8.00	7.25	16.94	16.94	0.75	0.00	656.86	648.86	649.61
5G	11.44	9.88	21.87	21.81	1.56	0.06	659.49	648.05	649.61
6	8.14	4.00	19.45	19.45	4.14	0.00	658.09	649.95	654.09
7	4.82	3.53	16.84	16.84	1.29	0.00	651.26	646.44	647.73
7A	11.09	11.00	20.81	20.80	0.09	0.01	650.30	639.21	639.30
8	13.79	13.98	22.91	22.93	-0.19	-0.02	654.67	640.88	640.69
9	13.60	13.10	20.67	20.67	0.50	0.00	659.25	645.65	646.15
9A	9.88	9.50	17.25	17.25	0.38	0.00	653.08	643.20	643.58
9B	10.46	7.91	20.61	20.60	2.55	0.01	657.79	647.33	649.88
9C	9.93	7.27	19.85	19.85	2.66	0.00	656.18	646.25	648.91
20	13.90	13.42	109.45	109.80	0.48	-0.35 *	652.54	638.64	639.12

[a] Delta DTW - Positive numbers indicate aquifer discharge from last quarter.

Negative numbers indicate aquifer recharge from last quarter.

[b] Delta DTB - negative numbers indicate slight silt accumulation since last quarter.

\* = DTB measurements varied by more than 0.1 foot.

## ATTACHMENT II(a)

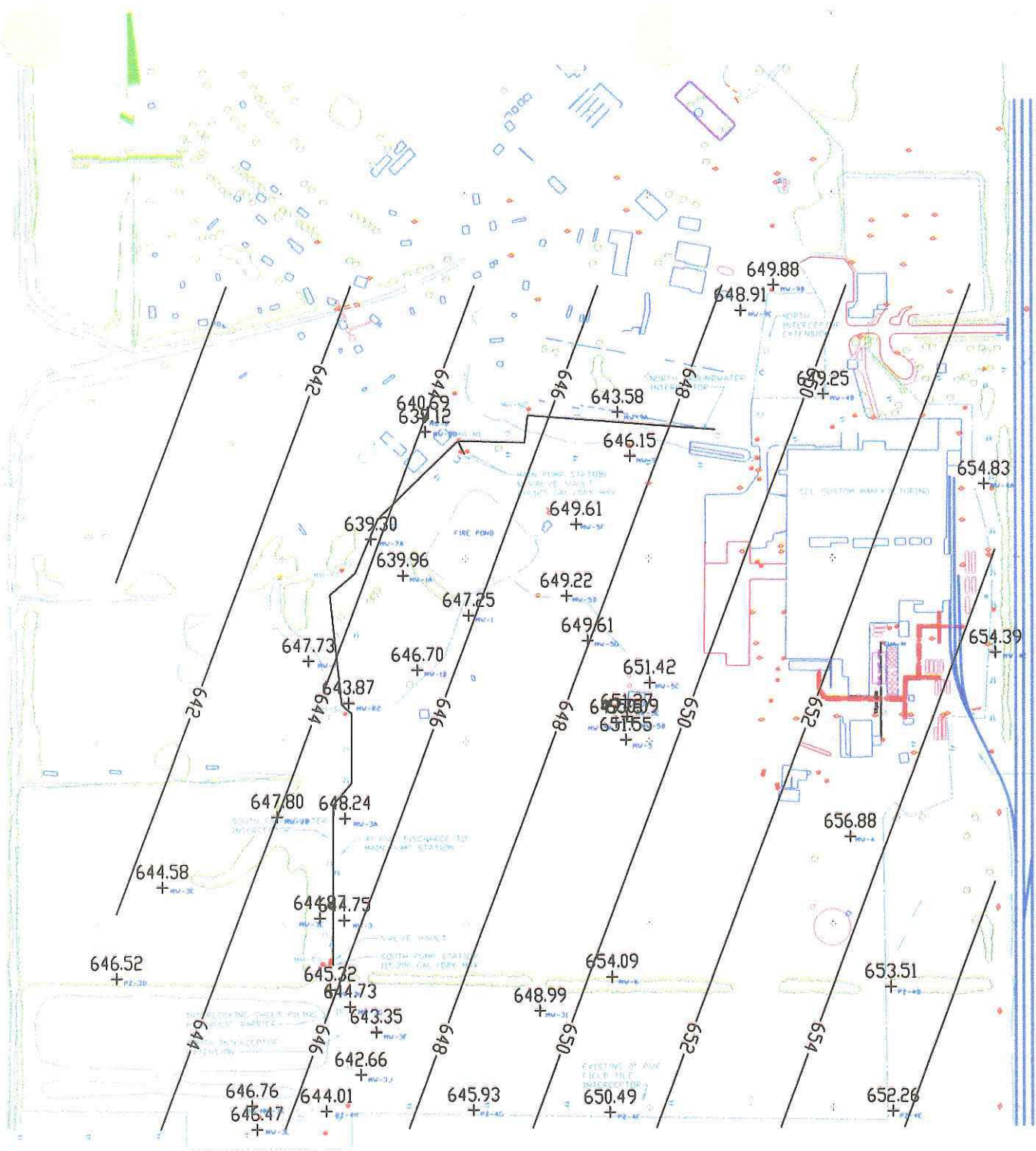
SUMMARY OF IN-SITU MEASUREMENTS COLLECTED FROM MONITORING WELLS  
 AT CCL CUSTOM MANUFACTURING, INC., DANVILLE, ILLINOIS FACILITY  
 March 2003

Monitoring Well Number	Temp. (C)	pH	Specific Conductance (mhos) [a]	Depth to Water (ft)	Depth to Bottom (ft)	Inner Casing Stickup (ft)	Surveyed Inside Pipe Elevation (ft. MSL)	Groundwater Surface Elevation (ft. MSL)	DTW-Below Land Surface (ft) [b]	DTB-Below Land Surface (ft)
1				6.65	15.00	0.66	653.90	647.25	5.99	14.34
1A				13.95	22.43	3.10	653.91	639.96	10.85	19.33
1B				7.55	17.14	2.04	654.25	646.70	5.51	15.10
2R				10.50	20.75	2.07	654.37	643.87	8.43	18.68
3				8.65	21.56	1.98	653.40	644.75	6.67	19.58
3A				5.26	18.28	2.44	653.50	648.24	2.82	15.84
3B	5.8	7.56	678	3.82	19.85	2.04	651.62	647.80	1.78	17.81
3C				8.75	18.05	1.90	653.33	644.58	6.85	16.15
3D				9.05	17.55	2.16	655.57	646.52	6.89	15.39
3E	8.9	7.35	603	8.70	20.80	1.85	653.57	644.87	6.85	18.95
3F	8.1	7.04	2,840	9.00	19.90	2.50	652.35	643.35	6.50	17.40
3G				6.90	19.60	2.40	651.63	644.73	4.50	17.20
3H				8.25	20.53	2.30	653.57	645.32	5.95	18.23
3I				7.51	21.80	2.40	656.50	648.99	5.11	19.40
3J				10.35	19.95	2.00	653.01	642.66	8.35	17.95
3K	7.2	7.33	679	5.55	19.15	-0.35	652.31	646.76	5.90	19.50
3L	7	7.50	666	5.02	22.00	-0.63	651.49	646.47	5.65	22.63
4	11.7	7.55	947	6.32	19.55	2.37	663.20	656.88	3.95	17.18
4A	8.6	7.25	731	7.20	22.00	2.93	662.03	654.83	4.27	19.07
4B	10.5	7.05	1,293	9.34	22.43	-0.62	658.59	649.25	9.96	23.05
4C				8.15	18.78	1.95	662.54	654.39	6.20	16.83
4D				7.00	24.27	2.00	660.51	653.51	5.00	22.27

4E				9.05	24.62	3.00	661.31	652.26	6.05	21.62
4F				5.72	20.11	2.00	656.21	650.49	3.72	18.11
4G				9.55	20.14	2.41	655.48	645.93	7.14	17.73
4H				13.22	21.52	2.24	657.23	644.01	10.98	19.28
5				10.95	18.47	1.46	662.50	651.55	9.49	17.01
5A				11.88	18.36	1.60	661.63	649.75	10.28	16.76
5B				9.50	20.11	0.43	659.59	650.09	9.07	19.68
5C				8.35	18.96	1.72	659.77	651.42	6.63	17.24
5D	9.3	7.13	440	7.75	16.99	2.01	656.97	649.22	5.74	14.98
5E				9.98	27.23	2.35	661.25	651.27	7.63	24.88
5F				7.25	16.94	1.85	656.86	649.61	5.40	15.09
5G				9.88	21.81	1.97	659.49	649.61	7.91	19.84
6	5.2	7.39	898	4.00	19.45	2.07	658.09	654.09	1.93	17.38
7	4.8	7.44	1,093	3.53	16.84	1.67	651.26	647.73	1.86	15.17
7A	8.6	6.98	2,880	11.00	20.80	2.37	650.30	639.30	8.63	18.43
8	10.6	6.90	1,149	13.98	22.93	2.35	654.67	640.69	11.63	20.58
9				13.10	20.67	2.23	659.25	646.15	10.87	18.44
9A	9.7	7.29	2,360	9.50	17.25	2.68	653.08	643.58	6.82	14.57
9B	9.4	7.28	1,528	7.91	20.60	2.20	657.79	649.88	5.71	18.40
9C	7.8	7.28	1,401	7.27	19.85	2.50	656.18	648.91	4.77	17.35
20				13.42	109.80	1.88	652.54	639.12	11.54	107.92

(a) - Conductivity values normalized to 25 C and reported in micro,(u), or milli, (m), mhos

(b) - Negative numbers denote that the water level is above the surface elevation in the wall standpipe.



EXIST. 4" PVC DISCHARGE TO  
WESTVILLE WELLS/CLARK SANDPANS  
DISTRICT 30' INTERCEPT

4" PE PIPE  
DISCHARGE POND  
25' DIA. GAL. POND HOLE

